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What is claimed is:

1. A method for virtually simulating actual networked applications within a network simulation, comprising the steps of:

initiating a server that interfaces to a network simulator, the server comprising functionality for establishment of a bidirectional mapping of each of one or more application codes to a simulated node or a communication port based on a communication technology;

initiating one or more client interfaces, the client interfaces being aware of the server;

providing network application code(s) to make use of the client interfaces, the network application code(s) able to communicate with the server;

the network simulator being able to interoperate with the server such that the application code's communication appears to originate from a simulated node to which it is mapped; and

modifying, via the clients and the server, the network application code by removing or inserting messages to or from simulated nodes.

2. A method for virtually simulating actual networked applications within a network simulation, comprising the steps of:
initiating one or more servers to interface to a network simulator;

initiating one or more clients to interface with one or more network simulators, where the clients are aware of the server;

bridging application code(s) via use of the client(s) so that the network application code can communicate with the server;

mapping the application code to a simulated node, communication from the application code now appearing to originate from the simulated node; and

insertion of and extraction of messages or packets from or to application code to simulated node via the clients and servers.

3. The method as recited in claim 2 wherein the step of initiating a server further comprises the step of establishing bidirectional mapping of each application code to the simulated nodes or communication ports based on the communication technology.

4. The method as recited claim 1 wherein the network simulator is IP based.

5. The method as recited in claim 4 wherein the network simulator further comprises an upper layer protocol.

6. The method as recited in claim 5; wherein the protocol is selected from the group consisting of TCP and UDP upper layer protocols

7. The method as recited in claim 1 wherein the application codes and network application code further utilize a communication styles and wherein communication style is selected from the group consisting of point-to-point, anycast, multicast and broadcast

8. The method as recited in claim 1 wherein the network simulator comprises a plurality of network simulators.

9. The method as recited in claim 1 wherein the server comprises a plurality of servers.

10. The method as recited in claim 1 wherein the mapping of application code to the simulated node is dynamic.

11. The method as recited in claim 1 wherein the network simulator executes in real-time.

12. The method as recited in claim 1 wherein the execution time of the network simulator is configurable.

13. The method as recited in claim 1 wherein the client or server are implemented via dedicated or separate hardware.

14. The method as recited in claim 2 wherein the application code is executed in parallel over a distributed system.

15. The method as recited claim 2 wherein the network simulator is IP based.

16. The method as recited in claim 15 wherein the network simulator further comprises a protocol.

17. The method as recited in claim 16 wherein the protocol is selected from the group consisting of TCP, UDP upper layer protocols.

18. The method as recited in claim 2 wherein the application code further utilizes a communication style, and wherein the communication style is selected from the group consisting of point-to-point, anycast, multicast and broadcast.

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19. The method as recited in claim 2 wherein the network simulator comprises a plurality of network simulators.

20. The method as recited in claim 2 wherein the server comprises one or more servers.

21. The method as recited in claim 2 wherein the mapping of application code to simulated network node is dynamic.

22. The method as recited in claim 2 wherein the network simulator executes in real-time.

23. The method as recited in claim 2 wherein the execution time of the network simulator is configurable.

24. The method as recited in claim 2 wherein the client or server are implemented via dedicated or separate hardware.

25. The method as recited in claim 2 wherein the application code is executed in parallel over a distributed system.

26. The method as recited in claim 1 wherein the server is a plug in to the simulator.

27. The method as recited in claim 2 wherein the server is a plug in to the simulator.

28. A system for virtually simulating actual networked applications within a network simulation, comprising
one or more network simulators;
one or more servers, the servers having functionality for:
 interfacing to one or more network simulators, and

inserting and extracting messages or packets from an application code,

one or more clients, the clients aware of the server and each having functionality for:

interfacing with the network simulators,

executing the application code so that the application code can communicate with the server,

mapping the application code to a simulated node, communication from the application code now appearing to originate from the simulated node, and

inserting and extracting of messages or packets from the application code.

29. The system according to claim 28, wherein the servers have functionality for providing message or packet transfer among simulated nodes and/or application codes.

30. The system according to claim 29, where the network simulators have functionality for providing message or packet transfer among simulated nodes and/or application codes.